

Notice of Allowability

Application No.

10/685,346

Examiner

Eugenia Wang

Applicant(s)

MATHIAS ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 6/11/07.
2. ☒ The allowed claim(s) is/are 2-8, 10-15, 17-19, 24-31, 35-40, 43, 44 and 48-57.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 6/6/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

1. In response to the amendment received June 11, 2007:
 - a. Claims 16 and 20-23 have been cancelled as per Applicant's request. Claims 2-8, 10-15, 17-19, 24-31, 35-40, 43, 44, and 48-57 are still pending.
 - b. The previous claim objection is withdrawn in light of the amendment.
 - c. The previous 112 rejections have been withdrawn in either (i) light of the amendment (as applied to claims 19 and 57) or (ii) light of the cancellation of the claim(s) (as applied to claims 20-23).
 - d. The art rejection of record is withdrawn.

Response to Arguments

2. Applicant's arguments, see pages 11 and 12, filed June 11, 2007, with respect to claims 55 have been fully considered and are persuasive. The rejection of claim 55 has been withdrawn. (Since rejected claims 2-8, 10-20, 24—31, 35-40, and 56 are dependent on claim 55, the rejections/objections applied to those claims have been withdrawn as well.)

Allowable Subject Matter

3. Claim 55 is allowed.

The following is an examiner's statement of reasons for allowance:

Claim 55 teaches a porous diffusion media positioned against a catalyst layer, where the diffusion media defines a major planar dimension with first and second major faces substantially parallel to the major planar dimension of the diffusion media. There

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are water transfer particles in the diffusion media, which are distributed in a manner such that there are high and low density regions of water transfer particles. The high and low particle density regions alternate across the major planar dimension of the porous diffusion media and are distributed between the first and second major faces in such a way that the first major face is collectively more hydrophilic than the second major face, wherein the first and second major faces each comprise of hydrophilic and hydrophobic portions. Furthermore, a hydrophobic material is disposed along the one of either first or second major face of the diffusion media.

None of the prior art of record, alone or in combination, appear to teach, suggest, or render obvious the invention of claim 55, since none of the prior art teach a diffusion media that is placed against a catalyst with the gradient of water transfer particles to create relatively hydrophobic and hydrophilic faces. Trapp et al. (made of record in the previous office action) is found to teach a gradient of particles, however, the hydrophobic and hydrophilic nature of the particles and thus the plate [5] is not taught. Additionally, the plate is not used as a diffusion layer, as is specified by claim 55. Therefore the invention of claim 55 is considered patentable over the prior art of record. Since claims 2-8, 10-15, 17-20, 24-31, 3540, and 56 are dependent on claim 55, they are allowed for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

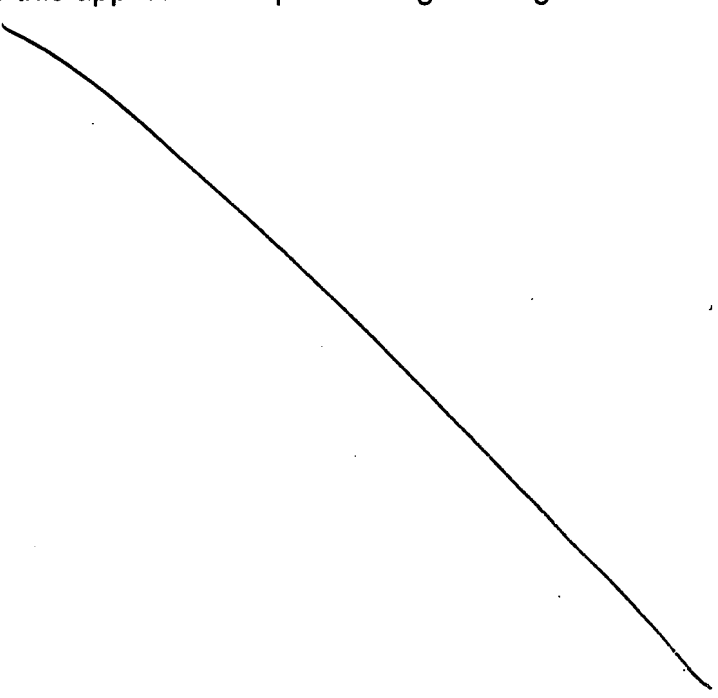
4. Claim 54 is allowed. The reasons for allowance have been indicated on the previous office action.

5. Claim 57 is allowed. In the previous office action, independent claim 57 was rejection under 35 U.S.C. 112, 2nd paragraph. However, this rejection has been overcome in light of the amendment. The reasons for allowance have been indicated on the previous office action. Since claims 43, 44, and 48-53 are dependent on claim 57, they are allowed for the same reason.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugenia Wang whose telephone number is 571-272-4942. The examiner can normally be reached on 8 - 4:30 Mon. - Fri., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW


GREGG CANTELMO
PRIMARY EXAMINER

12 July 2007